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ABSTRACT

A study was conducted to measure the effect and compare the results of developmental reading instruction for college students as prescribed from the specific results of a diagnostic reading test and a general, more traditionally used, survey reading test. The sample consisted of 226 students enrolled in different sections of a reading course required at the University of South Carolina for students with low Stanford Achievement Test scores. All students received two hours per week of classroom instruction. Experimental and control treatments were provided by graduate assistants for one hour of lab time each week. Individual prescriptions for lab instruction were written for the experimental students based on information from the subtests of the Stanford Diagnostic Reading Test only. Only the information from the subtests of the survey instrument, the Nelson-Denny Reading Test, was used in writing prescriptions for the control students. The gain in reading was measured by the pretest and posttest differences on both tests. There was a statistically significant difference in the means of the gain scores between the experimental students and the control group on many of the subskills on the Stanford Diagnostic Reading Test. However, the gains on the Nelson-Denny Reading Test did not reflect evidence of a significant difference. (MKM)

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The Need for Comparison Studies of College Students' Reading Gains in Developmental Reading Programs Using General and Specific Levels of Diagnosis

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There is not sufficient research in the field of postsecondary reading to provide an answer to the question of how best to measure skills, diagnose needs, prescribe instruction, and remediate reading problems. A comprehensive review (Flippo, 1979) of the research from 1935 through 1978 reveals only two studies, Cox and Swalm (1973) and Smith (1974, 1977), that have compared the effects of prescriptive instruction based on specific diagnosis or diagnostic testing of reading abilities with effects based on general diagnosis or survey

CS005282

testing of reading abilities. The findings of Cox and Swalm significantly favored the results of instruction based on more specific diagnoses, while the findings of Smith indicated no significant difference between the results of instruction based on more specific diagnoses and the results of instruction based on general diagnoses of reading abilities.

In his 1971 paper which discusses the trends in college reading, Raygor stated, "The cost-effectiveness factor is getting more and more important and we're going to have to start arguing for innovations in instructional programs on the basis of their ability to do a good job and to save money. College basic skills programs are going to be increasingly subject to the demand for cost-effectiveness considerations" (p. 7). Research investigating the most effective ways of testing, prescribing for, and instructing postsecondary students in reading is necessary for a body of research that could be examined to meet cost-effectiveness considerations.

More particularly, research is needed to explore the comparison between diagnostic and survey testing in postsecondary reading. Although studies upon studies have been completed in postsecondary reading, we still do not know the answers to the seemingly simplest questions concerning the most effective and efficient methods of testing, diagnosing, and remediating the developmental or remedial postsecondary population we serve. Ironside (1969) called for research that would indicate whether diagnostic tests or survey tests were more effective with programs for college students. Yet in Smith's dissertation (1974), she states that she could not find

any studies making that type of comparison (p. 20). Although the Cox and Swalm (1973) and Smith (1974, 1977) studies are the beginnings of a body of research in the proposed area of study, they both had their limitations in the relatively small sizes of their total groups, Cox and Swalm (n=98) and Smith (n=75).

There is a need for postsecondary reading program directors and practioners to find out how specific diagnosis should be in order to be able to help the students within the confines of one semester or quarter of instruction. How much detail is really helpful in the diagnosis? Is the more specific diagnostic reading test worth the time it takes? Is the more general reading test just as adequate and possibly better due to time considerations? A body of research focusing on these questions is missing in the literature.

The purpose for this study was to measure the effect of developmental reading instruction for postsecondary students prescribed from the specific results of a diagnostic reading test and to compare those results with the results of developmental reading instruction for postsecondary students prescribed from the general and more traditionally used results of a survey reading test. This study has increased the small body of research (Cox and Swalm, and Smith) on the comparison of general and specific diagnosis of postsecondary students' reading abilities.

Subjects

The sample in this study consisted of 226 students from an original group of approximately 450 freshmen enrolled in fifteen different sections of "Effective Reading" in the fall semester 1978 at the University of South Carolina's College of General Studies, Columbia, S. C. These students were required to take the three credit course because of low Stanford Achievement Test scores.

Procedures

Students were randomly assigned to experimental ($x=112$) or control ($x=114$) treatments. The nine instructors had approximately an equal number of experimental and control students in each of their sections. Experimental and control treatments were provided not by the instructors but by graduate assistants (supervised by the researcher) during lab time. All students were treated with two hours per week of classroom instruction with their instructor and one hour per week of reading lab instruction. This lab instruction was based on each student's individual prescription. On the basis of information from the subtests of the diagnostic instrument (Stanford Diagnostic Reading Test, Blue Level, 1976), individual prescriptions for reading skill improvement were written for the experimental students. Only the information from the subtests of the survey instrument (Nelson-Denny Reading Test, 1973) was used in writing prescriptions for the control students. The original diagnoses from the pretest information on students in both treatments were not altered in any way throughout remediation. Both the

control and experimental students had the same treatment, except for the amount of diagnostic information available for counseling and prescribing instruction during the lab sessions.

The prescription of the two groups was accomplished by using a card system designed by the researcher especially for testing instruments and materials selected for this study. The card system was programmed by the researcher, who cataloged all the materials into one or more of the ten selected skill designations, and by difficulty levels. (See Flippo, 1979, for more details.)

The gain in the ten selected subskills of reading was measured by the pretest and posttest differences on the Stanford Diagnostic Reading Test and the Nelson-Denny Reading Test. A t-pool test was used at the .05 level of significance.

Results

There was a statistically significant difference in the means of the gain scores of the experimental students in the subskills of literal comprehension, inferential comprehension, word meaning, phonetic analysis, structural analysis, and scanning and skimming. There was not a statistically significant difference between the means of the gain scores of the experimental students and the control students in the subskills of word parts, fast reading, vocabulary, and comprehension. However, on the subskills of fast reading and vocabulary, the observed gain of the experimental group was higher but not substantially higher at the .05 level.

This study's findings generally support the conclusions of Cox

and Swalm (1973) that postsecondary students do better in developmental reading programs that utilize more specific diagnosis and prescription than in reading programs which use more general testing of reading abilities. However, in this study, as in the Smith study (1974, 1977), the gains in the subskills from the Nelson-Denny Reading Test (vocabulary and comprehension) did not reflect evidence of a significant difference. Smith measured reading gains by the pretest and posttest differences of two groups on the Nelson-Denny alone. If this present study had solely used the Nelson-Denny to measure the gains, the findings would have supported the conclusions of Smith rather than that of Cox and Swalm. It appears that gains made on diagnostic reading tests may not necessarily be reflected in the results of survey reading tests.

This suggests that the Nelson-Denny Reading Test does not consistently appear to be a good discriminator of students that have improved more and students that have improved less. If Smith had given the diagnostic tests as pre and posttests to both her groups and compared those results between groups, she might have found that the group with more diagnostic information available before instruction did better as measured by the diagnostic tests. Unfortunately, this is not known, as Smith pretested both her groups with the Nelson-Denny and the more diagnostic tests, but posttested her groups with only the Nelson-Denny. Additionally, the gains on the subskill of comprehension, as measured by the Nelson-Denny, do not reflect the gains made on the subskills of literal and inferential comprehension, as measured by the Stanford Diagnostic. The t

values of literal and inferential comprehension indicated that there was a significant difference between the gains of the two groups. Yet, there was no significant or observed difference between the means of the groups on comprehension as measured only by the Nelson-Denny.

Implications

The educational implications from the results of this study are that: (1) It is advisable to give postsecondary developmental reading students a diagnostic reading test to identify their reading strengths and weaknesses prior to prescription of their reading instruction. (2) Postsecondary students' awareness of their specific reading skill needs might better enhance chances of development in these skill areas. (3) Postsecondary reading program directors and instructors should be cautious of using a survey reading test instrument alone to evaluate the progress of their developmental students, as the survey instrument might not reflect growth and changes in reading skills.

Given the high cost of developmental programs, the varied needs of the postsecondary students assigned to them, and the brief (usually one semester) time for remediation, it appears that a cost-effective program would be one that individualizes instruction as specifically as possible to individual students' reading skill needs. It is recommended that those responsible for the planning and implementation of these programs find ways to be as specific and individual in that instruction as possible and utilize the opportunity to conduct care-

fully controlled studies to contribute to research in this area.

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